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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,197	07/22/2003	Christoph Egger	TRG-314	1266

7590 02/08/2005  
LORUSSO LOUD & KELLY LLP.  
15 RYE STREET, SUITE 312  
PEASE INTERNATIONAL TRADEPORT  
PORTSMOUTH, NH 03801

EXAMINER

QUARTERMAN, KEVIN J

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/625,197

Applicant(s)

EGGER ET AL.

Examiner

Kevin Quarterman

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0703; 0504.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-12, in the reply filed on 22 November 2004 is acknowledged. The traversal is on the ground(s) that the inventions are not distinct because "the spark plug of claim 1 can only be made by the process of claim 13 and the process of claim 13 can only produce the spark plug of claim." This is not found persuasive because the spark plug of claim 1 can be made by the materially different process cited in the restriction requirement. The Examiner also notes that the sealing ring can be deformed in ways other than plastically, e.g., thermally.
2. The requirement is still deemed proper and is therefore made FINAL.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

3. The disclosure is objected to because of the following informalities: The disclosure lacks section headings, as described above, which makes it difficult to navigate through the disclosure. Appropriate correction is required.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it contains legal phraseology—i.e. said. Correction is required. See MPEP § 608.01(b).

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

7. The following title is suggested: --SPARK PLUG WITH SEALING RING AROUND CENTER ELECTRODE--.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 12 JW 2/6/05  
9. Claims 1- are rejected under 35 U.S.C. 102(b) as being anticipated by Podiak (US 4193012).

10. Regarding independent claim 1, Figure 1 of Podiak shows a spark plug with an insulating body (13) and a center electrode (14), wherein the center electrode is housed at least partly in a bore (17) in the insulator body, the center electrode being sealed off from the insulating body by at least one sealing ring (15) surrounding the center electrode, wherein the sealing ring comprises material that is plastically deformable by compression (col. 3, ln. 40-47).

11. Regarding claim 2, Podiak discloses the sealing ring comprising at least one metal or one alloy of metals (col. 3, ln. 40-47).

12. Regarding claim 3, Podiak discloses the sealing ring comprising a metal selected from the group formed from soft irons and copper and nickel and high-grade steel, or aluminum materials or alloys of these materials (col. 3, ln. 40-47).

13. Regarding claim 4, Figure 1 of Podiak shows the sealing ring resting against the insulator body at the end of the insulator body, which in the fitted position of the spark plug, points to a combustion chamber of an internal combustion engine (claim 3).

14. Regarding claim 5, Figure 1 of Podiak shows the sealing ring resting against the insulator body in a recess (not labeled) of same partially covering the sealing ring.

15. Regarding claim 6, Figure 1 of Podiak shows a center electrode carrier (not labeled) on the end of the center electrode, which in the fitted position, points to a combustion chamber of an internal combustion engine (claim 3), and wherein the sealing ring is arranged or clamped between the center electrode carrier and the insulator body.

16. Regarding claim 7, Figure 1 of Podiak shows an attachment ring (23) on the end of the center electrode, which in the fitted position, points to a combustion chamber of an internal combustion engine, and wherein the sealing ring is arranged or clamped between the attachment ring and the insulator body.

17. Regarding claim 8, the method of welding the center electrode carrier or attachment ring to the center electrode is not germane to the issue of patentability of the device itself (MPEP § 2113). Thus, the welding methods have not been given patentable weight.

18. Regarding claim 9, Figure 1 of Podiak shows the center electrode comprising an area of enlarged diameter outside the insulator body at its end, which in the fitted position of the spark plug, points to the combustion chamber of an internal combustion

engine and the sealing ring is arranged or clamped between the area with enlarged diameter and the insulator body.

19. Regarding claim 10, Figure 1 of Podiak shows the sealing ring (25) arranged or clamped inside the insulator body between a shoulder of the insulator body, surrounding the center electrode and an area of enlarged diameter of the center electrode.

20. Regarding claim 11, Podiak discloses that the insulator body is a ceramic insulator body (col. 2, ln. 46).

21. Regarding claim 12, Figure 1 of Podiak shows the center electrode sealed off from the insulator body exclusively by at least one sealing ring surrounding the center electrode.

### ***Conclusion***

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Moray (US 3569765) discloses a spark plug with cup-like center. Schnurmacher (US 3567987) discloses a spark plug with three concentric electrodes for use in a combustion engine.

**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman  
Examiner  
Art Unit 2879

kq   
5 February 2005

  
**Joseph Williams**  
**Primary Examiner**  
**Art Unit 2879**